

Liparis barbata Lindl. (Orchidaceae) – new to the flora of Australia

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Summary

Gray, B., Ormerod, P. & Simpson, L. (2021). *Liparis barbata* Lindl. (Orchidaceae) – new to the flora of Australia. *Austrobaileya* 11: 115–117. *Liparis barbata* Lindl. (Orchidaceae) is newly recorded for the flora of Australia from northern Queensland and is known from a single location in the Wet Tropics bioregion.

Key Words: Orchidaceae; *Liparis*; *Liparis barbata*; Australia flora; Queensland flora; new record

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Introduction

Liparis L.C.Rich. (in the broad sense) is a pantropical and temperate genus of 480–500 terrestrial to epiphytic orchids found in a variety of habitats, including grassy fields, monsoonal forest to tropical rainforest. Twelve species (ten endemic) of *Liparis* are currently recognised for Australia (APC 2021); *Liparis barbata* Lindl. is recorded here as the thirteenth. Molecular studies by Cameron (2005) found that *Liparis* could be divided into four major clades, two of which comprised terrestrial taxa, and two that comprised mostly epiphytic taxa. Ongoing molecular studies have shown that the situation is increasingly complex; however, the basal split into two major clades (epiphytic versus terrestrial) remains supported (Li *et al.* 2020). The type species of *Liparis*, *L. loeselii* (L.) L.C.Rich., belongs with mainly temperate terrestrial taxa bearing conduplicate leaves. *Liparis barbata* belongs to the second group of terrestrial taxa which are mostly tropical in distribution and bear plicate leaves. Species from this second group of terrestrial taxa have been allocated by some authors to genera such as *Empusa* Lindl.; however, a robust classification based on phylogeny remains to be finalised. As a result, we treat this species in *Liparis* in the broad sense.

Materials and methods

This study is based on the examination of living specimens, dried materials, and spirit collections held at A, AMES, BM, BRI, CNS, K, L and NY. Measurements were taken from dried specimens, flowers of which were rehydrated, and from material in spirit.

Most of the extra-Australian synonymy for this species was enumerated by Ormerod (2005) with the exception of *Liparis indirae* Manilal & C.S.Kumar from India, which was accidentally omitted. The other eight taxonomic synonyms are *Liparis alavensis* P.J.Cribb & Whistler (Samoa), *L. fimbriata* A.F.G.Kerr (Thailand), *L. maboroensis* Schltr. (Papua New Guinea), *L. maboroensis* var. *bistriata* J.J.Sm. (Papua, Indonesia), *L. pectinata* Ridl. (Philippines), *L. pectinifera* Ridl. (Perak, Malaysia), *L. punctifera* Schltr. (Sulawesi, Indonesia), and *L. wrayi* Hook.f. (Perak, Malaysia).

Taxonomy

Liparis barbata Lindl., *Gen. Sp. Orch. Pl.*: 27 (1830); *Leptorkis barbata* (Lindl.) O.Kuntze, *Rev. Gen. Pl.* 2: 671 (1891); *Empusa barbata* (Lindl.) T.C.Hsu, *Illustr. Fl. Taiwan* 2: 14 (2016). **Type:** Zeylonae [Sri Lanka], in 1829, *J. Macrae* 6 (holo: K-L).

Plants terrestrial. **Rhizome** creeping, terete, short. **Roots** terete, pubescent. **Stems** erect, terete, fleshy, 2–4 leaved in apical half, 50–150 mm long, 5–8 mm thick. **Leaves** obliquely ovate-elliptic, acute, plicate, margins more or less undulate, 50–80 mm long, 25–40 mm wide; petiole and sheath up to 50 mm long. **Inflorescence** terminal, alate, 60–150 mm long; peduncle to 40 mm long; rachis subclaxly 5–15 flowered, 20–110 mm long; floral bracts triangular, acute, 1.5–2.5 mm long. **Flowers** yellowish green, the labellum usually with

two parallel reddish-brown bands. **Pedicel with ovary** clavate, hexalate, 10–15 mm long. **Dorsal sepal** oblong-ligulate, obtuse, 7.5–8 mm long, 2–2.3 mm wide. **Lateral sepals** obliquely oblong-lanceolate, acute to subacute, *c.* 6.5 mm long × 2.5 mm wide. **Petals** linear, obtuse, 7–8 mm long, 0.8–1 mm wide. **Labellum** oblong-cuneate, apex with two dentate to fimbriate terminal lobules, base with two small parallel calli, 6.5–7 mm long, 3–5 mm wide. **Column** semiterete, very narrowly alate, 4–5 mm long. **Figs. 1 & 2.**



Fig. 1. *Liparis barbata*. Plant in situ. (Gray BG9996 & Simpson, BRI, CNS). Photo: L. Simpson.



Fig. 2. *Liparis barbata*. Inflorescence with flowers. (Gray BG9996 & Simpson, BRI, CNS). Photo: B. Gray.

Additional specimens examined: **India.** Mowgong, Jul 1850, *Hooker & Thomson 1881* (K). **Myanmar.** Lawa, 84–85 km W of Myitkyina on Ledo road, Jul 1958, *McKee 6284* (K); Eastern Tenasserim, May 1932, *Kerr 1007* (K). **Thailand.** Kao Luang, Prachuap, Jul 1926, *Kerr 326* (K); Doi Sutep, Oct 1914, *Kerr 351A* (K). **Malaysia.** PERAK: Upper part, Jun 1889, *Wray 3631* (K). SABAH: Tawau District, Tawau River floodplain, Jun 1984, *Beaman et al. 10184* (K); Tambunan District, Crocker Range, KM 59.5 on Kota Kinabalu, Aug 1983, *Beaman 6818* (K); Ranau District, near Poring Hot Springs, Aug 1990, *Beaman 10926* (K). **Brunei.** Temburong River, Batu Apoi Forest Reserve, Jun 1991, *Poulsen 200* (K); Belait District, Kampong Teraja, Oct 1989, *Forman 1077* (K). **Philippines.** Leyte, Dagami, Jul 1913, *Wenzel 207* (K). **Papua New Guinea.** MOROBE PROVINCE: Oomsis Creek, 28–29 km W of Lae, Aug 1963, *Garay & Hartley s.n.* (AMES); *ibid*, Sep 1963, *Garay s.n.* (AMES); *ibid*, Jun 1962, *Hartley 10416* (AMES). CENTRAL PROVINCE: Koitaki, Apr 1935, *Carr 10036* (BM, L, NY). **Australia.** **Queensland.** COOK DISTRICT: Whyanbeel Creek, N of Mossman, Sep 2019, *Gray BG9982 & Simpson* (CNS); *ibid*, Mar 2020, *Gray BG9996 & Simpson* (BRI, CNS).

Distribution and habitat: *Liparis barbata* has a wide distribution in mainland Asia (India, Malaysia, Myanmar, Sri Lanka, Thailand), Malesia (Brunei, Indonesia, Papua New Guinea, Philippines), Australasia (Australia – Queensland, Solomon Islands) and Oceania (Samoa, Vanuatu). Throughout its range this species seems to prefer shady lowland to lower montane forest, from 0–1400 m. In Australia it grows in wet lowland rainforest near creeks.

Typification: The protologue for *Liparis barbata* states “in pratis ad latera collinum *Zeylonae*, *florens* Novembri, *Macrae*” (Lindley 1830). The specimen in the Lindley herbarium (examined *in situ* by Ormerod) has a few more details, notably the year of collection and Macrae’s initial and collection number.

Notes: *Liparis barbata* is easily distinguished from its Australian congeners by its oblong-cuneate lip that is terminated by two short fimbriate to dentate lobules (**Figs. 1 & 2**). Its closest Australian relatives are *L. collinsii* B.Gray, *L. petricola* (D.L.Jones & B.Gray) Bostock, and *L. simmondsii* F.M.Bailey but these differ in having an obovate to suborbicular lip, with an entire, acute to emarginate apex.

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